



STIC Search Report

EIC 1700

STIC Database Tracking Number: 215080

TO: Michael Bernshteyn
Location: Remsen 10a34
Art Unit : 1713
February 12, 2007
Phone: 571-272-2411
Serial Number: 10 / 505346

From: Jan Delaval

Location: EIC 1700
Remsen 4a30
Phone: 571-272-2504
jan.delaval@uspto.gov

Search Notes

SEARCH REQUEST FORM

FEB 8 RECD

Scientific and Technical Information Center

Pat. & T.M. Office

Requester's Full Name: Michael Bernshstein Examiner #: 81515 Date: 01/07/07
Art Unit: 1713 Phone Number 30 272-2411 Serial Number: 10/505,346
Mail Box and Bldg/Room Location: Room 10A34 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Papermaking chemical, method for manufacturing the same

Inventors (please provide full names): Toshitsugu Kiyosada, Akira Endou,
Satoru Iwata, Masatomi Ogawa

Earliest Priority Filing Date: 02/22/2002

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please, try to find a papermaking chemical according claim 16, and a method for its manufacturing according claim 17.

Thank you

M. Bernshstein

STAFF USE ONLY

Searcher: Qan
Searcher Phone #: 22504
Searcher Location: _____
Date Searcher Picked Up: 2/12/07
Date Completed: 2/12/07
Searcher Prep & Review Time: _____
Clerical Prep Time: 15
Online Time: 55

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) ☒ _____
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN ☒ _____
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

=> fil reg

FILE 'REGISTRY' ENTERED AT 10:42:41 ON 12 FEB 2007
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STRUCTURE FILE UPDATES: 11 FEB 2007 HIGHEST RN 920490-65-9
DICTIONARY FILE UPDATES: 11 FEB 2007 HIGHEST RN 920490-65-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

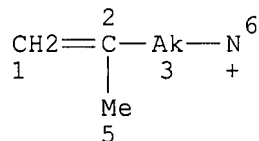
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REGISTRY includes numerically searchable data for experimental and
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experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> d sta que l31

L19 STR



NODE ATTRIBUTES:

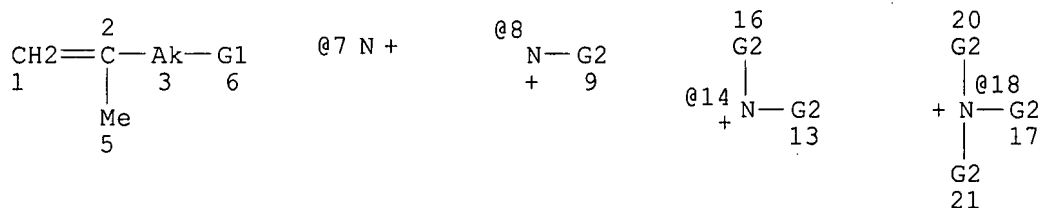
CHARGE IS *+ AT 6
NSPEC IS RC AT 6
CONNECT IS M1 RC AT 6
DEFAULT MLEVEL IS ATOM
DEFAULT ELEVEL IS LIMITED
ECOUNT IS M1-X4 C AT 3

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L21 SCR 970 AND 963 AND 1054 AND 1992
L23 742 SEA FILE=REGISTRY CSS FUL L19 AND L21
L24 673 SEA FILE=REGISTRY ABB=ON PLU=ON L23/COM
L25 69 SEA FILE=REGISTRY ABB=ON PLU=ON L23 NOT L24
L26 2 SEA FILE=REGISTRY ABB=ON PLU=ON L25 AND C25H50NO
L27 673 SEA FILE=REGISTRY ABB=ON PLU=ON L24 NOT L25
L28 675 SEA FILE=REGISTRY ABB=ON PLU=ON (L26 OR L27)
L29 STR



Ak @22 Ak @23

VAR G1=7/8/14/18

VAR G2=22/23

NODE ATTRIBUTES:

CHARGE IS ** AT 7
 CHARGE IS ** AT 8
 CHARGE IS ** AT 14
 CHARGE IS ** AT 18
 NSPEC IS RC AT 8
 NSPEC IS RC AT 14
 NSPEC IS RC AT 18
 CONNECT IS M1 RC AT 23
 DEFAULT MLEVEL IS ATOM
 GGCAT IS LOC AT 23
 DEFAULT ECLEVEL IS LIMITED
 ECOUNT IS M1-X4 C AT 3
 ECOUNT IS M22 C AT 22

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L31 355 SEA FILE=REGISTRY SUB=L28 CSS FUL L29

100.0% PROCESSED 675 ITERATIONS

355 ANSWERS

SEARCH TIME: 00.00.01

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(FILE 'HOME' ENTERED AT 09:52:10 ON 12 FEB 2007)
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 09:52:32 ON 12 FEB 2007

L1 1 S US20050272889/PN OR (US2005-505346# OR WO2003-JP1918 OR JP200
 E KIYOSADA/AU
 L2 9 S E6
 E TOSHITSUGU/AU
 E ENDOU/AU
 L3 93 S E4,E11
 E AKIRA/AU
 L4 13 S E3
 L5 1 S E20
 E IWATA/AU
 L6 1 S E3

E IWATA S/AU
L7 244 S E3,E4
L8 69 S E15
E IWATA NAME/AU
L9 35 S E4
E SATORU/AU
L10 3 S E3
E OGAWA/AU
L11 2 S E3
E OGAWA M/AU
L12 498 S E3-E5
L13 48 S E70
E OGAWA NAME/AU
L14 82 S E4
E MASATOMI/AU
E PMC/PA,CS
L15 280 S E3,E4 OR ((SEIKO? OR JAPAN?) (L)PMC?)/PA,CS
SEL RN L1

FILE 'REGISTRY' ENTERED AT 09:56:51 ON 12 FEB 2007

L16 37 S E1-E37
L17 STR
L18 12 S L17 CSS SAM
L19 STR L17
L20 0 S L19 CSS SAM
L21 SCR 970 AND 963 AND 1054 AND 1992
L22 3 S L19 AND L21 CSS SAM
L23 742 S L19 AND L21 CSS FUL
SAV L23 BERNSH505/A
L24 673 S L23/COM
L25 69 S L23 NOT L24
L26 2 S L25 AND C25H50NO
L27 673 S L24 NOT L25
L28 675 S L26,L27
L29 STR L19
L30 20 S L29 CSS SAM SUB=L28
L31 355 S L29 CSS FUL SUB=L28
SAV L31 BERNSH505A/A
L32 320 S L28 NOT L31

FILE 'HCAPLUS' ENTERED AT 10:24:34 ON 12 FEB 2007

L33 140 S L31
L34 122 S L32
L35 131 S L33,L34 AND PY<=2002 NOT P/DT
L36 205 S L33,L34 AND (PD<=20020222 OR AD<=20020222 OR PRD<=20020222)
L37 74 S L36 AND P/DT
L38 205 S L35,L37
L39 11 S L1-L15 AND L33,L34
L40 1 S L39 AND L38
L41 10 S L39 NOT L40

FILE 'REGISTRY' ENTERED AT 10:27:08 ON 12 FEB 2007

L42 21 S L16 AND L23
L43 0 S L42 NOT L31,L32
L44 16 S L16 NOT L42
L45 4 S L44 AND (C8H17N OR C7H15NO)

FILE 'HCAPLUS' ENTERED AT 10:29:17 ON 12 FEB 2007

L46 1 S L45 AND L40
E PAPER/CT

L47 105504 S E3-E58
 L48 231 S E62
 L49 22871 S E75-E77,E70
 L50 10785 S E87-E95
 E E3+ALL
 L51 120380 S E2+NT
 E E98+ALL
 E E3+ALL
 E E99+ALL
 L52 5497 S E3
 E E8+ALL
 L53 70555 S E2+OLD
 E PAPER/CT
 E E62+ALL
 E E2+ALL
 L54 4443 S E2+OLD
 E E10+ALL
 E PAPER/CT
 E E87+ALL
 L55 10785 S E3
 L56 260875 S PAPER?/SC,SX
 L57 1 S L38 AND L47-L56
 L58 3 S L38 AND ?PAPER?
 L59 3 S L46,L57,L58

FILE 'REGISTRY' ENTERED AT 10:35:14 ON 12 FEB 2007

E ACRYLAMIDE/CN
 L60 1 S E3
 E METHACRYLAMIDE/CN
 L61 1 S E3
 E METHALLYL/CN
 L62 1 S E115
 E ALLYLSULFONIC ACID/CN
 L63 1 S E3
 L64 2 S L60,L61
 L65 2 S L62,L63
 SEL RN L64
 L66 16894 S E1-E2/CRN
 SEL RN L65
 L67 1696 S E3-E4/CRN
 L68 35 S L31,L32 AND L66
 L69 10 S L31,L32 AND L67
 L70 10 S L68 AND L69
 L71 25 S L68 NOT L70

FILE 'HCAPLUS' ENTERED AT 10:39:21 ON 12 FEB 2007

L72 5 S L70
 L73 1 S L72 AND L38
 L74 3 S L59,L73
 L75 1 S L71 AND L38
 L76 3 S L59,L73,L75
 L77 71 S L31 (L) PREP+NT/RL
 L78 69 S L32 (L) PREP+NT/RL
 L79 105 S L77,L78 AND L38

FILE 'REGISTRY' ENTERED AT 10:41:45 ON 12 FEB 2007

L80 1 S UREA/CN

FILE 'HCAPLUS' ENTERED AT 10:41:48 ON 12 FEB 2007

L81 1 S L80 AND L79

L82 2 S UREA AND L79
L83 2 S L81,L82
L84 1 S L83 NOT CCR/TI
L85 3 S L76,L84

FILE 'REGISTRY' ENTERED AT 10:42:41 ON 12 FEB 2007

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 10:42:53 ON 12 FEB 2007

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FILE COVERS 1907 - 12 Feb 2007 VOL 146 ISS 8

FILE LAST UPDATED: 11 Feb 2007 (20070211/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l85 bib abs hitind hitstr retable tot

L85 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:671123 HCAPLUS

DN 139:198975

TI **Paper** of high bursting strength, sizes and (meth)acrylamide polymers therefor, and preparation thereof

IN Kiyosada, Shunji; Endo, Akira; **Iwata, Satoru; Ogawa, Masatomi**

PA **Japan PMC Corporation, Japan**

SO Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DT **Patent**

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003238631	A	20030827	JP 2002-47116	20020222 <--
	CA 2477226	A1	20030828	CA 2003-2477226	20030221 <--
	WO 2003070796	A1	20030828	WO 2003-JP1918	20030221 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,				

FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 AU 2003211406 A1 20030909 AU 2003-211406 20030221 <--
 EP 1486515 A1 20041215 EP 2003-706991 20030221 <--
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 CN 1636026 A 20050706 CN 2003-804297 20030221 <--
 US 2005272889 A1 20051208 US 2005-505346 20050720 <--
 PRAI JP 2002-47116 A 20020222 <--
 WO 2003-JP1918 W 20030221 <--
 AB The polymers comprise (A) MeC:CH₂R₁N+R₂R₃R₄X- [R₁ = C1-4 alkylene; R₂-R₄ =
 H, C≤22 alkyl excluding the case where 2 or 3 of them are H; X- =
 (in)organic acid anion], (B) (meth)acrylamide, and (C) ionic monomers
 excluding A. In the process, ≥1 of the monomer A-C are polymerized in
 the first stage of polymerization and remainders of the monomers are added to
 the
 reactors and then polymerized Thus, 66.3:2.0:1.5:0.20 (mol) acrylamide
 (I)/dimethylaminoethyl methacrylate/itaconic acid (II)/2-propen-1-aminium
 N,N,N,2-tetra-Me chloride (III) was polymerized in the presence of ammonium
 persulfate and further polymerized in the presence of 27.95:1.5:0.5:0.05 (mol)
 I/acryloyloxyethyl dimethylbenzyl ammonium chloride/II/III to give a
 polymer. **Paper** hand-made from corrugated **wastepaper**
 by use of a size containing the polymer showed internal bonding strength 289
 mJ, ash 7.41%, and Stoeckigt sizing degree 120 s.
 IC ICM C08F0220-56
 ICS C08F0002-00; C08F0226-02; C08F0228-02; D21H0017-45; D21H0019-20;
 D21H0021-18; D21H0021-10; D21H0021-16
 CC 43-7 (Cellulose, Lignin, **Paper**, and Other Wood Products)
 Section cross-reference(s): 38
 ST **paper** size acrylamide polymer burst tear strength; propenaminium
 acrylamide polymer **paper** strengthening agent; internal bonding
 strength **paper** size methacrylamide polymer
 IT **Paper**
 Sizes (agents)
 (sizes containing (meth)acrylamide copolymers and imparting **paper**
 with high bursting and tear strength)
 IT 16370-13-1P, 2-Propen-1-aminium N,N,N,2-tetramethyl chloride
 62721-66-8P 91485-07-3P 94267-60-4P
 101258-75-7P 122412-33-3P, Benzenemethanaminium
 N,N-dimethyl-N-(2-methyl-2-propenyl) chloride 123941-84-4P
 585539-74-8P 585539-76-0P 585539-79-3P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP
 (Preparation); RACT (Reactant or reagent)
 (monomers; sizes containing (meth)acrylamide copolymers and imparting
paper with high bursting and tear strength)
 IT 585539-63-5P 585539-64-6P 585539-66-8P
 585539-68-0P 585539-70-4P 585539-72-6P
 585539-73-7P 585539-75-9P 585539-77-1P
 585539-78-2P 585539-80-6P 585539-81-7P
 585539-82-8P 585539-83-9P 585540-02-9P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (sizes containing (meth)acrylamide copolymers and imparting **paper**
 with high bursting and tear strength)
 IT 57-13-6, Urea, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (sizes containing (meth)acrylamide copolymers and imparting **paper**
 with high bursting and tear strength)
 IT 75-50-3, Trimethylamine, reactions 102-82-9, Tributylamine 103-83-3,

N,N-Dimethylbenzylamine 105-59-9 108-01-0, N,N-Dimethylaminoethanol
109-02-4, N-Methylmorpholine 109-83-1, 2-Hydroxy-N-methylethylamine
109-89-7, Diethylamine, reactions 121-44-8, Triethylamine, reactions
124-28-7, N,N-Dimethyloctadecylamine 563-47-3, 1-Chloro-2-methyl-2-
propene

RL: RCT (Reactant); RACT (Reactant or reagent)
(sizes containing (meth)acrylamide copolymers and imparting **paper**
with high bursting and tear strength)

IT 16370-13-1P, 2-Propen-1-aminium N,N,N,2-tetramethyl chloride

62721-66-8P 91485-07-3P 94267-60-4P

101258-75-7P 122412-33-3P, Benzenemethanaminium

N,N-dimethyl-N-(2-methyl-2-propenyl) chloride 123941-84-4P

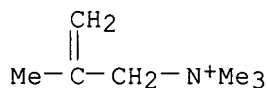
585539-74-8P 585539-76-0P 585539-79-3P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); RACT (Reactant or reagent)

(monomers; sizes containing (meth)acrylamide copolymers and imparting
paper with high bursting and tear strength)

RN 16370-13-1 HCAPLUS

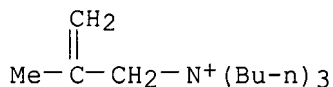
CN 2-Propen-1-aminium, N,N,N,2-tetramethyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

RN 62721-66-8 HCAPLUS

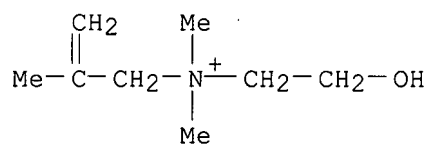
CN 1-Butanaminium, N,N-dibutyl-N-(2-methyl-2-propenyl)-, chloride (9CI) (CA
INDEX NAME)



● Cl⁻

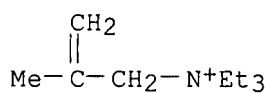
RN 91485-07-3 HCAPLUS

CN 2-Propen-1-aminium, N-(2-hydroxyethyl)-N,N,2-trimethyl-, chloride (9CI)
(CA INDEX NAME)



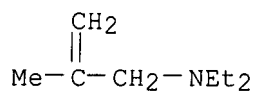
● Cl⁻

RN 94267-60-4 HCAPLUS
CN 2-Propen-1-aminium, N,N,N-triethyl-2-methyl-, chloride (9CI) (CA INDEX NAME)



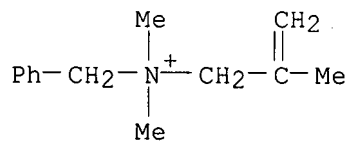
● Cl⁻

RN 101258-75-7 HCAPLUS
CN 2-Propen-1-amine, N,N-diethyl-2-methyl-, hydrochloride (9CI) (CA INDEX NAME)



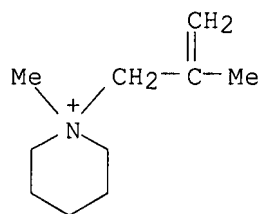
● HCl

RN 122412-33-3 HCAPLUS
CN Benzenemethanaminium, N,N-dimethyl-N-(2-methyl-2-propenyl)-, chloride (9CI) (CA INDEX NAME)



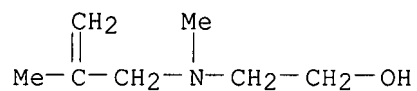
● Cl⁻

RN 123941-84-4 HCAPLUS
CN Piperidinium, 1-methyl-1-(2-methyl-2-propenyl)-, chloride (9CI) (CA INDEX NAME)



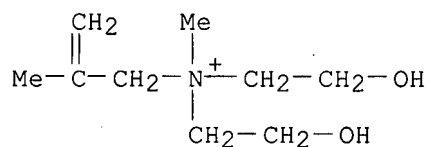
● Cl⁻

RN 585539-74-8 HCAPLUS
 CN Ethanol, 2-[methyl(2-methyl-2-propenyl)amino]-, hydrochloride (9CI) (CA INDEX NAME)



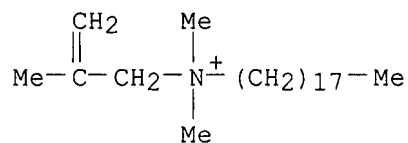
● HCl

RN 585539-76-0 HCAPLUS
 CN 2-Propen-1-aminium, N,N-bis(2-hydroxyethyl)-N,2-dimethyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

RN 585539-79-3 HCAPLUS
 CN 1-Octadecanaminium, N,N-dimethyl-N-(2-methyl-2-propenyl)-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

IT 585539-63-5P 585539-64-6P 585539-66-8P
585539-68-0P 585539-70-4P 585539-72-6P
585539-73-7P 585539-75-9P 585539-77-1P
585539-78-2P 585539-80-6P 585539-81-7P
585539-82-8P 585539-83-9P 585540-02-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(sizes containing (meth)acrylamide copolymers and imparting paper with high bursting and tear strength)

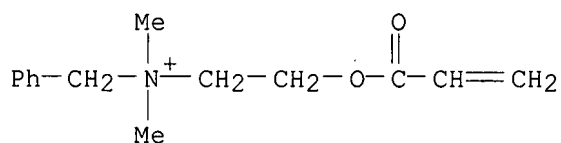
RN 585539-63-5 HCAPLUS

CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with 2-(dimethylamino)ethyl 2-methyl-2-propenoate, methylenebutanedioic acid, 2-propenamide and N,N,N,2-tetramethyl-2-propen-1-aminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 46830-22-2

CMF C14 H20 N O2 . Cl

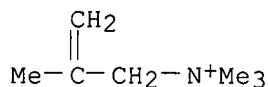


● Cl⁻

CM 2

CRN 16370-13-1

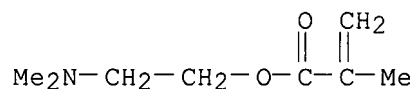
CMF C7 H16 N . Cl



● Cl⁻

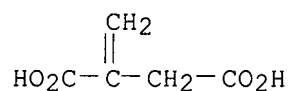
CM 3

CRN 2867-47-2
CMF C8 H15 N O2



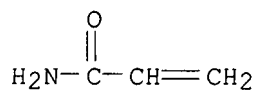
CM 4

CRN 97-65-4
CMF C5 H6 O4



CM 5

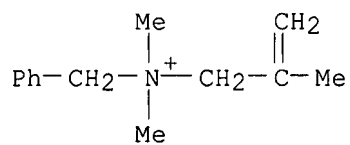
CRN 79-06-1
CMF C3 H5 N O



RN 585539-64-6 HCAPLUS
CN Benzenemethanaminium, N,N-dimethyl-N-(2-methyl-2-propenyl)-, chloride, polymer with 2-(dimethylamino)ethyl 2-methyl-2-propenoate, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]benzenemethanaminium chloride, hexahydro-1,3,5-tris(1-oxo-2-propenyl)-1,3,5-triazine, methylenebutanedioic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 122412-33-3
CMF C13 H20 N . Cl

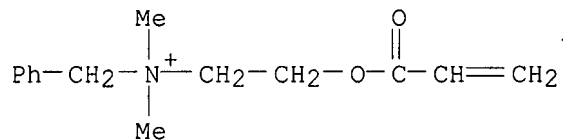


● Cl⁻

CM 2

CRN 46830-22-2

CMF C14 H20 N O2 . Cl

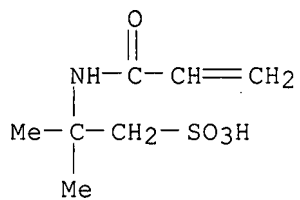


● Cl⁻

CM 3

CRN 15214-89-8

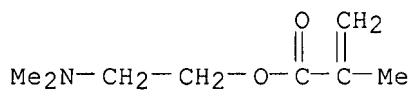
CMF C7 H13 N O4 S



CM 4

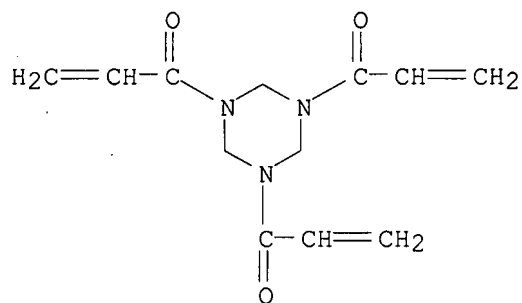
CRN 2867-47-2

CMF C8 H15 N O2



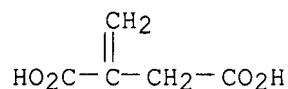
CM 5

CRN 959-52-4
CMF C12 H15 N3 O3



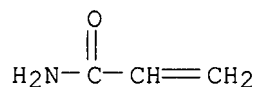
CM 6

CRN 97-65-4
CMF C5 H6 O4



CM 7

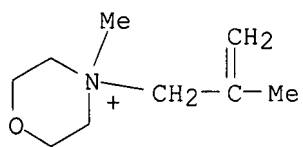
CRN 79-06-1
CMF C3 H5 N O



RN 585539-66-8 HCAPLUS
CN Morpholinium, 4-methyl-4-(2-methyl-2-propenyl)-, chloride, polymer with 2-(dimethylamino)ethyl 2-methyl-2-propenoate, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]benzenemethanaminium chloride, N,N-dimethyl-2-propenamide, ethenylphosphonic acid, methylenebutanedioic acid and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 587854-60-2
CMF C9 H18 N O . Cl

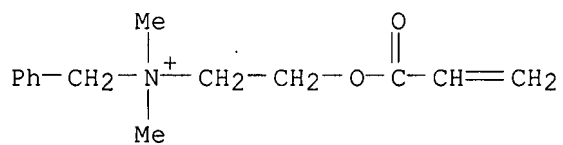


● Cl⁻

CM 2

CRN 46830-22-2

CMF C14 H20 N O2 . Cl

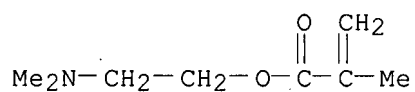


● Cl⁻

CM 3

CRN 2867-47-2

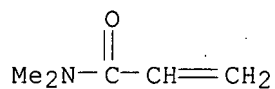
CMF C8 H15 N O2



CM 4

CRN 2680-03-7

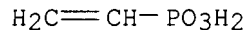
CMF C5 H9 N O



CM 5

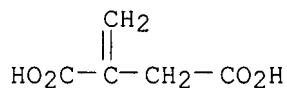
CRN 1746-03-8

CMF C2 H5 O3 P



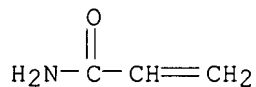
CM 6

CRN 97-65-4
CMF C5 H6 O4



CM 7

CRN 79-06-1
CMF C3 H5 N O

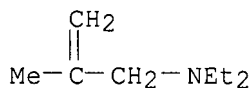


RN 585539-68-0 HCAPLUS

CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with N,N-diethyl-2-methyl-2-propen-1-amine hydrochloride, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, N,N'-methylenebis[2-propenamide], methylenebutanedioic acid and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

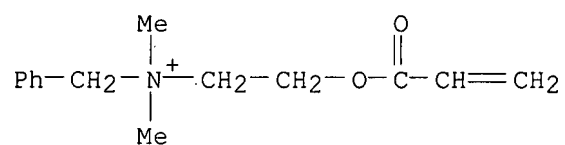
CRN 101258-75-7
CMF C8 H17 N . Cl H



● HCl

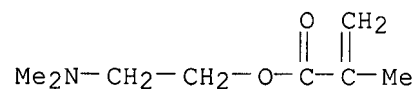
CM 2

CRN 46830-22-2
CMF C14 H20 N O2 . Cl



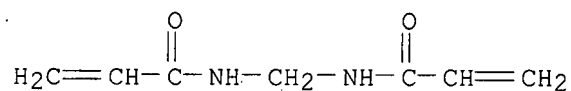
CM 3

CRN 2867-47-2
CMF C8 H15 N O2



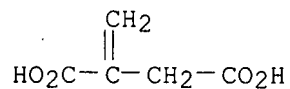
CM 4

CRN 110-26-9
CMF C7 H10 N2 O2



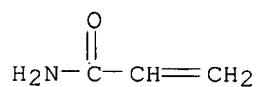
CM 5

CRN 97-65-4
CMF C5 H6 O4



CM 6

CRN 79-06-1
CMF C3 H5 N O

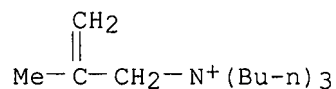


RN 585539-70-4 HCAPLUS
 CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with N,N-dibutyl-N-(2-methyl-2-propenyl)-1-butanaminium chloride, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, N,N'-methylenebis[2-propenamide], methylenebutanedioic acid and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 62721-66-8

CMF C16 H34 N . C1

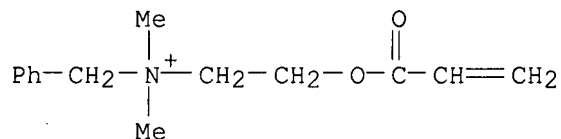


● Cl⁻

CM 2

CRN 46830-22-2

CMF C14 H20 N O2 . C1

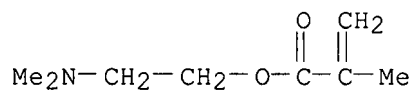


● Cl⁻

CM 3

CRN 2867-47-2

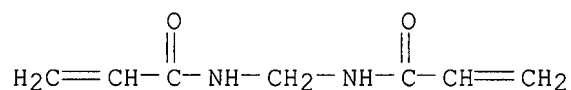
CMF C8 H15 N O2



CM 4

CRN 110-26-9

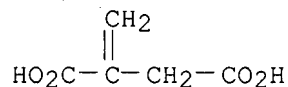
CMF C7 H10 N2 O2



CM 5

CRN 97-65-4

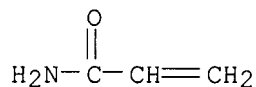
CMF C5 H6 O4



CM 6

CRN 79-06-1

CMF C3 H5 N O



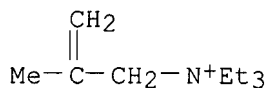
RN 585539-72-6 HCAPLUS

CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with N-[3-(dimethylamino)propyl]-2-propenamide, N,N-dimethyl-2-propenamide, methylenebutanedioic acid, 2-propenamide and N,N,N-triethyl-2-methyl-2-propen-1-aminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 94267-60-4

CMF C10 H22 N . Cl

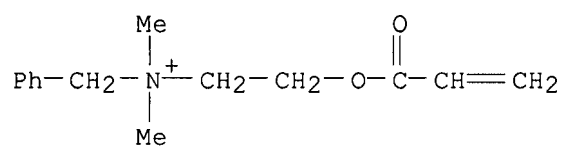


● Cl⁻

CM 2

CRN 46830-22-2

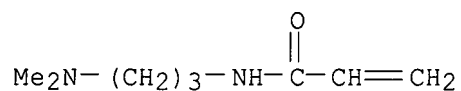
CMF C14 H20 N O2 . Cl



CM 3

CRN 3845-76-9

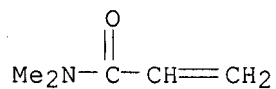
CMF C8 H16 N2 O



CM 4

CRN 2680-03-7

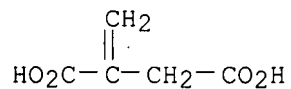
CMF C5 H9 N O



CM 5

CRN 97-65-4

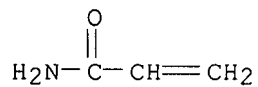
CMF C5 H6 O4



CM 6

CRN 79-06-1

CMF C3 H5 N O

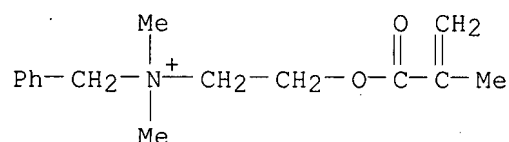


RN 585539-73-7 HCAPLUS
 CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with N-[3-(dimethylamino)propyl]-2-propenamide, N,N-dimethyl-2-propenamide, hexahydro-1,3,5-tris(1-oxo-2-propenyl)-1,3,5-triazine, methylenebutanedioic acid, 2-propenamide and N,N,N,2-tetramethyl-2-propen-1-aminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 46917-07-1

CMF C15 H22 N O2 . Cl

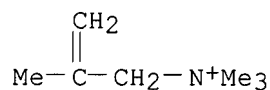


● Cl⁻

CM 2

CRN 16370-13-1

CMF C7 H16 N . Cl

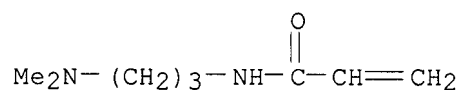


● Cl⁻

CM 3

CRN 3845-76-9

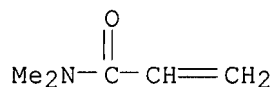
CMF C8 H16 N2 O



CM 4

CRN 2680-03-7

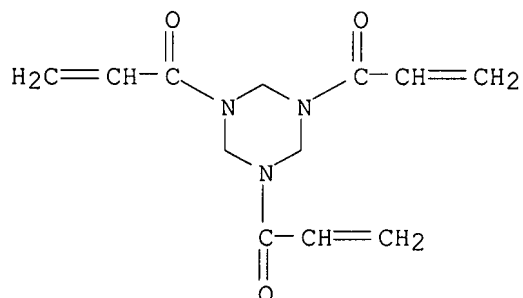
CMF C5 H9 N O



CM 5

CRN 959-52-4

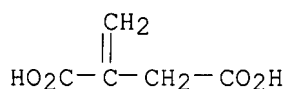
CMF C12 H15 N3 O3



CM 6

CRN 97-65-4

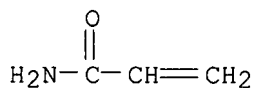
CMF C5 H6 O4



CM 7

CRN 79-06-1

CMF C3 H5 N O



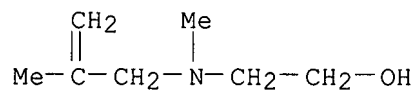
RN 585539-75-9 HCAPLUS

CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with N-[3-(dimethylamino)propyl]-2-propenamide, N,N-dimethyl-2-propenamide, methylenebutanedioic acid, 2-[methyl(2-methyl-2-propenyl)amino]ethanol hydrochloride and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 585539-74-8

CMF C7 H15 N O . Cl H

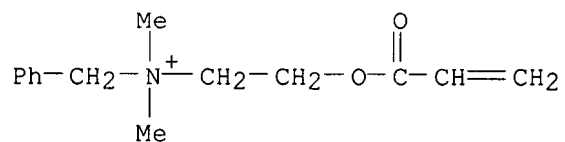


● HCl

CM 2

CRN 46830-22-2

CMF C14 H20 N O2 . Cl

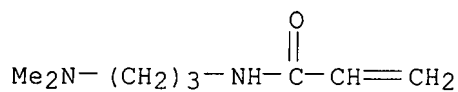


● Cl⁻

CM 3

CRN 3845-76-9

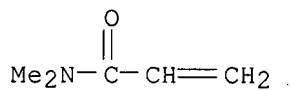
CMF C8 H16 N2 O



CM 4

CRN 2680-03-7

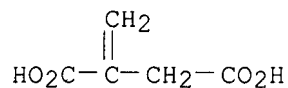
CMF C5 H9 N O



CM 5

CRN 97-65-4

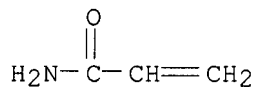
CMF C5 H6 O4



CM 6

CRN 79-06-1

CMF C3 H5 N O



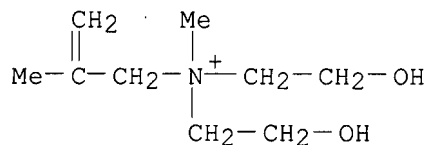
RN 585539-77-1 HCAPLUS

CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with N,N-bis(2-hydroxyethyl)-N,2-dimethyl-2-propen-1-aminium chloride, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]benzenemethanaminium chloride, N,N-dimethyl-2-propenamide, methylenebutanedioic acid, 2-propenamide and 2-propenenitrile (9CI) (CA INDEX NAME)

CM 1

CRN 585539-76-0

CMF C9 H20 N O2 . C1

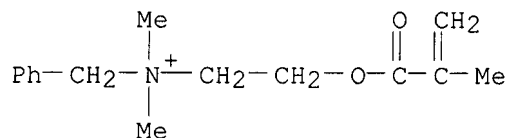


● Cl⁻

CM 2

CRN 46917-07-1

CMF C15 H22 N O2 . C1

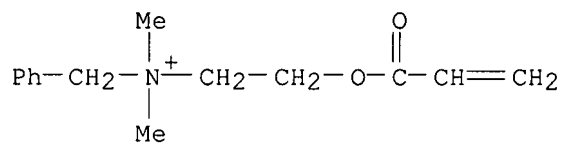


● Cl⁻

CM 3

CRN 46830-22-2

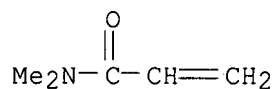
CMF C14 H20 N O2 . Cl



CM 4

CRN 2680-03-7

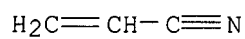
CMF C5 H9 N O



CM 5

CRN 107-13-1

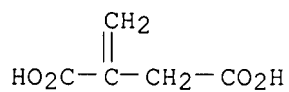
CMF C3 H3 N



CM 6

CRN 97-65-4

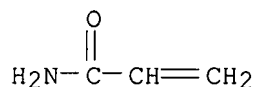
CMF C5 H6 O4



CM 7

CRN 79-06-1

CMF C3 H5 N O



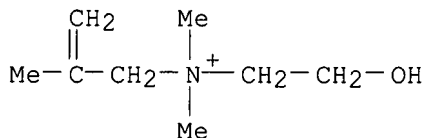
RN 585539-78-2 HCAPLUS

CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with 2-(dimethylamino)ethyl 2-methyl-2-propenoate, hexahydro-1,3,5-tris(1-oxo-2-propenyl)-1,3,5-triazine, N-(2-hydroxyethyl)-N,N,2-trimethyl-2-propen-1-aminium chloride, methylenebutanedioic acid, N-(1-methylethyl)-2-propenamide and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 91485-07-3

CMF C8 H18 N O . Cl

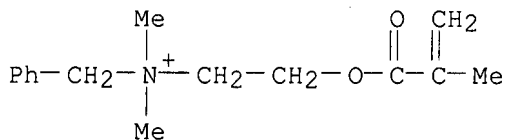


● Cl⁻

CM 2

CRN 46917-07-1

CMF C15 H22 N O2 . Cl

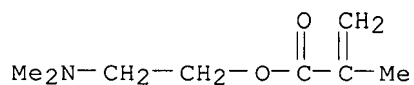


● Cl⁻

CM 3

CRN 2867-47-2

CMF C8 H15 N O2

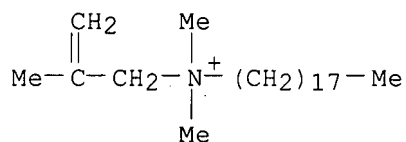


N,N-dimethyl-2-propenamide, N-(2-hydroxyethyl)-N,N,2-trimethyl-2-propen-1-aminium chloride, methylenebutanedioic acid, 2-methyl-2-propenamide and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 585539-79-3

CMF C24 H50 N . Cl

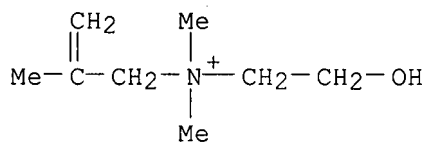


● Cl⁻

CM 2

CRN 91485-07-3

CMF C8 H18 N O . Cl

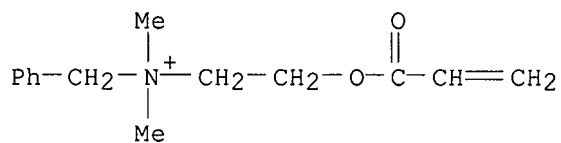


● Cl⁻

CM 3

CRN 46830-22-2

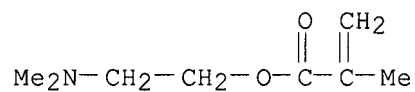
CMF C14 H20 N O2 . Cl



● Cl⁻

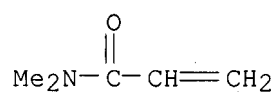
CM 4

CRN 2867-47-2
CMF C8 H15 N O2



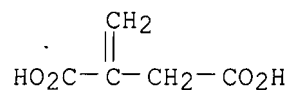
CM 5

CRN 2680-03-7
CMF C5 H9 N O



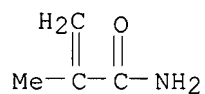
CM 6

CRN 97-65-4
CMF C5 H6 O4



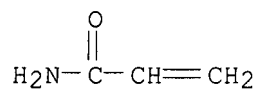
CM 7

CRN 79-39-0
CMF C4 H7 N O



CM 8

CRN 79-06-1
CMF C3 H5 N O



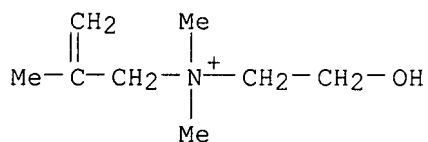
RN 585539-81-7 HCAPLUS
CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with 2-(dimethylamino)ethyl 2-methyl-2-propenoate,

N,N-dimethyl-2-propenamide, N-(2-hydroxyethyl)-N,N,2-trimethyl-2-propen-1-aminium chloride, methylenebutanedioic acid, 2-propenamide and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 91485-07-3

CMF C8 H18 N O . Cl

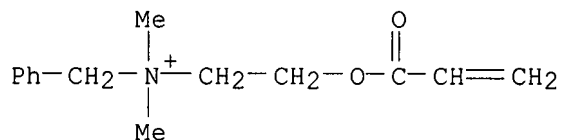


● Cl⁻

CM 2

CRN 46830-22-2

CMF C14 H20 N O2 . Cl

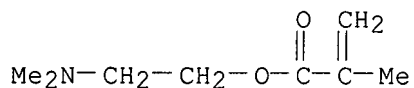


● Cl⁻

CM 3

CRN 2867-47-2

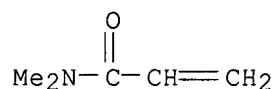
CMF C8 H15 N O2



CM 4

CRN 2680-03-7

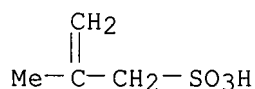
CMF C5 H9 N O



CM 5

CRN 1561-92-8

CMF C4 H8 O3 S . Na

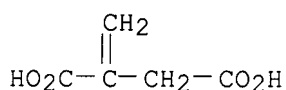


● Na

CM 6

CRN 97-65-4

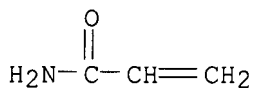
CMF C5 H6 O4



CM 7

CRN 79-06-1

CMF C3 H5 N O



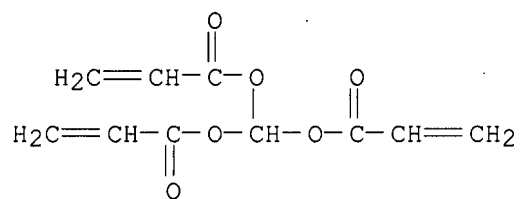
RN 585539-82-8 HCAPLUS

CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with hexahydro-1,3,5-tris(1-oxo-2-propenyl)-1,3,5-triazine, N-(2-hydroxyethyl)-N,N,2-trimethyl-2-propen-1-aminium chloride, methylenebutanedioic acid, methylidyne tri-2-propenoate, 2-propenamide and sodium 2-methyl-2-propene-1-sulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 119495-38-4

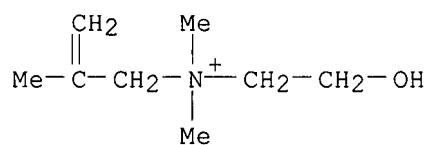
CMF C10 H10 O6



CM 2

CRN 91485-07-3

CMF C8 H18 N O . Cl

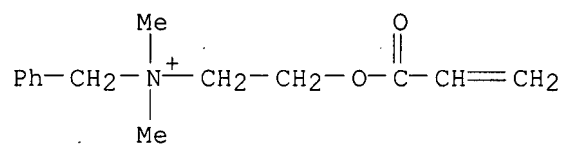


● Cl⁻

CM 3

CRN 46830-22-2

CMF C14 H20 N O2 . Cl



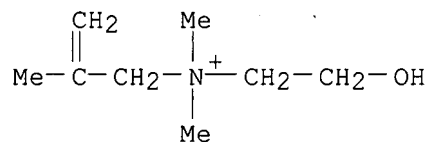
● Cl⁻

CM 4

CRN 1561-92-8

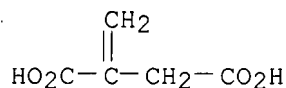
CMF C4 H8 O3 S . Na

CRN 91485-07-3
CMF C8 H18 N O . Cl

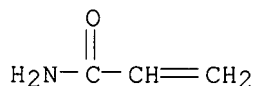


● Cl⁻

CM 2
CRN 97-65-4
CMF C5 H6 O4

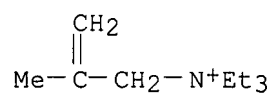


CM 3
CRN 79-06-1
CMF C3 H5 N O



RN 585540-02-9 HCAPLUS
CN Benzenemethanaminium, N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with N,N-dimethyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl]benzenemethanaminium chloride, hexahydro-1,3,5-tris(1-oxo-2-propenyl)-1,3,5-triazine, methylenebutanedioic acid, methyl 2-methyl-2-propenoate, 2-propenamide and N,N,N-triethyl-2-methyl-2-propen-1-aminium chloride (9CI) (CA INDEX NAME)

CM 1
CRN 94267-60-4
CMF C10 H22 N . Cl

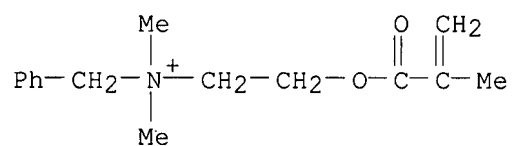


● Cl⁻

CM 2

CRN 46917-07-1

CMF C15 H22 N O2 . Cl

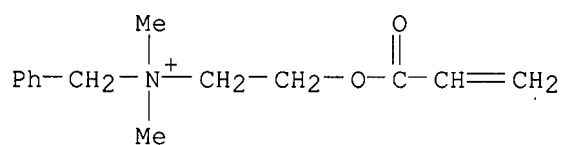


● Cl⁻

CM 3

CRN 46830-22-2

CMF C14 H20 N O2 . Cl

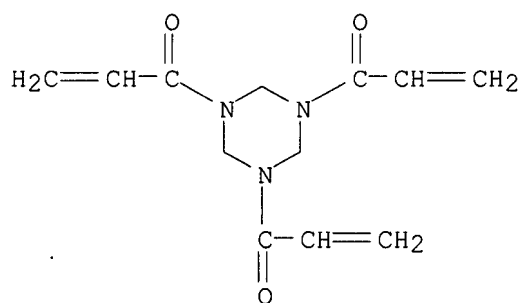


● Cl⁻

CM 4

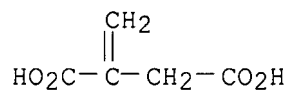
CRN 959-52-4

CMF C12 H15 N3 O3



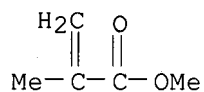
CM 5

CRN 97-65-4
CMF C5 H6 O4



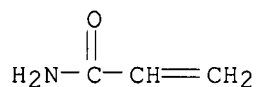
CM 6

CRN 80-62-6
CMF C5 H8 O2

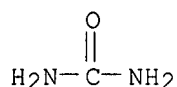


CM 7

CRN 79-06-1
CMF C3 H5 N O



IT **57-13-6, Urea**, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(sizes containing (meth)acrylamide copolymers and imparting **paper** with high bursting and tear strength)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



L85 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1966:483119 HCAPLUS

DN 65:83119

OREF 65:15611e-h

TI Water-soluble linear polymers

PA Peninsular Chemresearch, Inc.

SO 14 pp.

DT **Patent**

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1037028		19660720	GB 1963-49003	19631211 <--
PRAI	US		19621214	<--	

GI For diagram(s), see printed CA Issue.

AB Linear high-mol.-weight polymers were obtained by treatment of monomers containing 2 olefinic groups separated by 3 C atoms and a quaternary ammonium chloride group with tert-BuOOH in H₂O. Thus, monomers having the general formula I were polymerized. (R, R₁, R₂, R₃ are given): H, H, Me, Me; H, H, Et, Et; H, H, CH₂CH₂OH, CH₂CH₂OH; H, H, Bu, Bu; H, H, n-dodecyl, n-dodecyl; Me, Me, Me, Me; H, Me, Me, Me; H, Cl, Me, Me; Cl, Cl, Me, Me; Cl, Me, Me, Me; H, H, PhOCH₂, PhOCH₂; Br, Br, EtOCH₂, EtOCH₂; Cl, Cl, EtO₂CCH₂CH₂, EtO₂CCH₂CH₂; H, H, FCH₂(CH₂)₂, FCH₂(CH₂)₂; Me, Me, NCCH₂CH₂, NCCH₂CH₂; H, H, PhOCH₂CH₂, PhOCH₂CH₂; H, H, naphthyloxyethyl, naphthyloxyethyl; H, H, PrSCH₂, PrSCH₂; Me, Me, PhSCH₂CH₂, PhSCH₂CH₂; H, H, AcCH₂, AcCH₂; Me, Me, cyclopentylmethyl, cyclopentylmethyl; H, H, cyclohexylmethyl, cyclohexylmethyl; H, H, MeCH(NO₂)CH₂, MeCH(NO₂)CH₂; Me, Me, CH₂CH₂CONH₂, CH₂CH₂CONH₂; H, H, Me, Ph. Other monomers used were: N,N-diallyl-, N-allyl-N-methyl-2-vinyl-, N,N-dimethyl-2,6-divinyl-, and N,N-bis(p-cyanophenyl)-2,6-divinylpiperidinium chloride; N,N-diallyl, N-allyl-N-methyl-2-vinyl-, N,N-dimethyl-2,6-divinyl-, N,N-bis(p-chlorophenyl)-2,6-divinyl-, and N-methallyl-N-(p-acetophenyl-2-vinylmorpholinium chloride; and N,N-diallyl-, N-allyl-N-methyl-2-vinyl-, N,N-dimethyl-2,5-divinyl-, N,N-bis(m-ethylthiophenyl)-2,5-divinyl-, and N-(phenylthioethyl) - N-(hydroxyethyl)-2,6-divinylpyrrolidinium chloride. Other heterocyclic monomers were 1,1-diallylpyrazolinium chloride, 1,1-diallylimidazolinium chloride, and N-allyl-2-vinylpyridinium chloride. N, N-Diallylpyrrole was polymerized by BaO₂. By using a quaternary anion-exchange column, the polymeric chlorides obtained were converted to polymers having other anions. The polymer products are useful as spinning aids, antistatic, bacteriostatic, and fungistatic agents, wet-strength improvers for **papers**, accelerators for curing rubber, curing agents for epoxy resins, stabilizers and regulators for particle size in suspension polymerization, and as surfactants, especially flocculating agents.

IC C08F

CC 48 (Plastics Technology)

IT **6982-68-9**, Ammonium, dimethylbis(2-methylallyl), chloride
 13107-00-1, Ammonium, diallyldiethyl, chloride 13239-81-1, Morpholinium,
 4,4-di-2-propenyl-, chloride 13731-90-3, Morpholinium,
 4-allyl-4-methyl-2-vinyl-, chloride 13731-91-4, Morpholinium,
 4,4-dimethyl-2,6-divinyl-, chloride **13731-92-5**, Morpholinium,
 4-(p-acetylphenyl)-4-(2-methylallyl)-2-vinyl-, chloride 13731-93-6,
 Pyrrolidinium, 1,1-diallyl-, chloride 13731-94-7, Pyrrolidinium,

1-allyl-1-methyl-2-vinyl-, chloride 13731-95-8, Pyrrolidinium,
1,1-dimethyl-2,5-divinyl-, chloride 13731-96-9, Pyrrolidinium,
1-(2-hydroxyethyl)-1-[2-(phenylthio)ethyl]-2,5-divinyl-, chloride
13731-97-0, Pyrrolidinium, 1,1-diallyl-, chloride 13866-89-2, Ammonium,
diallylmethylphenyl, chloride 13866-90-5, Pyrrolidinium,
1,1-bis[m-(ethylthio)phenyl]-2,5-divinyl-, chloride **13897-53-5**,
Ammonium, bis(cyclopentylmethyl)bis(2-methylallyl), chloride 13962-94-2,
Morpholinium, 4,4-bis(p-chlorophenyl)-2,6-divinyl-, chloride 14219-12-6,
Ammonium, diallylbis(2-hydroxyethyl), chloride 14219-13-7, Ammonium,
diallyldibutyl, chloride 14219-14-8, Ammonium, diallyldidodecyl,
chloride **14219-15-9**, Ammonium, allyldimethyl(2-methylallyl),
chloride 14219-16-0, Ammonium, allyl(2-chloroallyl)dimethyl, chloride
14219-17-1, Ammonium, bis(2-chloroallyl)dimethyl, chloride
14219-18-2, Ammonium, (2-chloroallyl)dimethyl(2-methylallyl),
chloride 14219-19-3, Ammonium, bis(2-bromoallyl)bis(2-ethoxyethyl),
chloride 14219-20-6, Ammonium, bis(2-carboxyethyl)bis(2-chloroallyl),
chloride, di-Et ester 14219-21-7, Ammonium, diallylbis(4-fluorobutyl),
chloride 14219-23-9, Ammonium, diallylbis(2-phenoxyethyl), chloride
14219-24-0, Ammonium, diallylbis[(propylthio)methyl], chloride
14219-25-1, Ammonium, diacetonyldiallyl, chloride 14219-27-3, Ammonium,
diallylbis(cyclohexylmethyl), chloride 14219-28-4, Ammonium,
diallylbis(2-nitropropyl), chloride **14219-29-5**, Ammonium,
bis(2-carbamoyl)ethyl)bis(2-methylallyl), chloride **15553-03-4**,
Ammonium, bis(2-methylallyl)bis[2-(phenylthio)ethyl], chloride
30112-64-2, Ammonium, diallylbis(methoxyphenyl), chloride 30304-59-7,
Ammonium, diallylbis[2-(naphthyl)oxy)ethyl], chloride 48042-45-1,
Ammonium, diallyldimethyl

(polymerization of, with peroxide catalysts, and polymers therefrom)

IT **14219-22-8**, Ammonium, bis(2-cyanoethyl)bis(2-methylallyl),
chloride

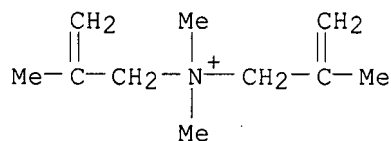
(polymerization of, with. peroxide catalysts, and polymers therefrom)

IT **6982-68-9**, Ammonium, dimethylbis(2-methylallyl), chloride
13731-92-5, Morpholinium, 4-(p-acetylphenyl)-4-(2-methylallyl)-2-
vinyl-, chloride **13897-53-5**, Ammonium,
bis(cyclopentylmethyl)bis(2-methylallyl), chloride **14219-15-9**,
Ammonium, allyldimethyl(2-methylallyl), chloride **14219-18-2**,
Ammonium, (2-chloroallyl)dimethyl(2-methylallyl), chloride
14219-29-5, Ammonium, bis(2-carbamoyl)ethyl)bis(2-methylallyl),
chloride **15553-03-4**, Ammonium, bis(2-methylallyl)bis[2-
(phenylthio)ethyl], chloride

(polymerization of, with peroxide catalysts, and polymers therefrom)

RN 6982-68-9 HCAPLUS

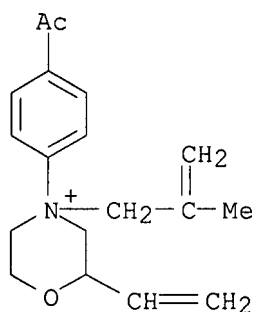
CN 2-Propen-1-aminium, N,N,2-trimethyl-N-(2-methyl-2-propenyl)-, chloride
(9CI) (CA INDEX NAME)



● Cl⁻

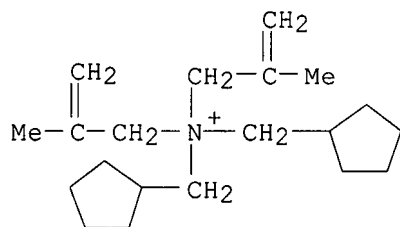
RN 13731-92-5 HCAPLUS

CN Morpholinium, 4-(p-acetylphenyl)-4-(2-methylallyl)-2-vinyl-, chloride
(8CI) (CA INDEX NAME)



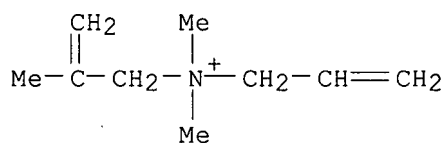
● Cl⁻

RN 13897-53-5 HCAPLUS
CN Ammonium, bis(cyclopentylmethyl)bis(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)



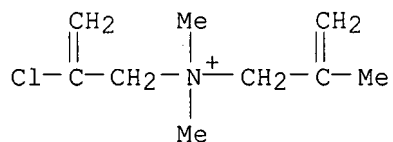
● Cl⁻

RN 14219-15-9 HCAPLUS
CN Ammonium, allyldimethyl(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)



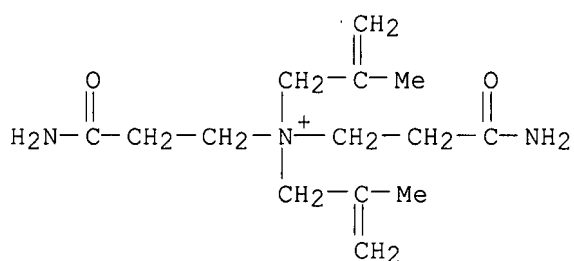
● Cl⁻

RN 14219-18-2 HCAPLUS
CN Ammonium, (2-chloroallyl)dimethyl(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)



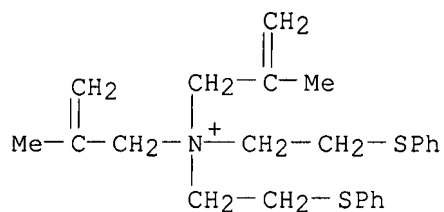
● Cl⁻

RN 14219-29-5 HCAPLUS
CN Ammonium, bis(2-carbamoylethyl)bis(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)



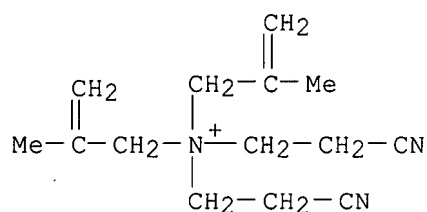
● Cl⁻

RN 15553-03-4 HCAPLUS
CN Ammonium, bis(2-methylallyl)bis[2-(phenylthio)ethyl]-, chloride (8CI) (CA INDEX NAME)



● Cl⁻

IT **14219-22-8**, Ammonium, bis(2-cyanoethyl)bis(2-methylallyl), chloride
(polymerization of, with. peroxide catalysts, and polymers therefrom)
RN 14219-22-8 HCAPLUS
CN Ammonium, bis(2-cyanoethyl)bis(2-methylallyl)-, chloride (8CI) (CA INDEX NAME)



● Cl⁻

L85 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1962:73382 HCAPLUS

DN 56:73382

OREF 56:14209c-i,14210a-h

TI Enamines. III. Alkylation of enamines derived from aldehydes

AU Opitz, Guenter; Mildenberger, Hilmar

CS Univ. Tuebingen, Germany

SO Ann. (1961), 649, 26-35

DT Journal

LA Unavailable

OS CASREACT 56:73382

AB cf. CA 54, 14254h. Tertiary enamines derived from disubstituted aldehydes gave with MeI or EtI by means of N-alkylation α,β -unsatd. quaternary ammonium salts. The action of alkyl halides on tertiary enamines from Ach and monosubstituted aldehydes produced self-condensation of the enamine with alkylation of the cleaved secondary amines. C-Alkylations succeeded only with especially reactive halides. (All expts. were carried out under N in anhydrous solvents). To 109.5 g. Et₂NH, 105 g. K₂CO₃, and 150 cc. Et₂O was added dropwise 33 g. paraldehyde at 0-5° with stirring and cooling, stirred 14 hrs. at room temperature, centrifuged, the solution concentrated, and the residue [40 g.; (Et₂N)₂CHMe] subjected to destructive distillation to give 8.3 g. Et₂NCH:CH₂ (I), b₁₀₀ 47-52°. ZCH:CHMe (II) (Z = 1-piperidino throughout this abstract), b₁₅ 61-3°; ZCH:CHEt (III), b₁₄ 73.5°. 1-Morpholino-1-butene (IV), b₁₂ 73-4°, was prepared in 78% yield; 1-morpholino-1-heptene (V) b₁₄ 120°. I (8.3 g.) in 20 cc. dioxane treated dropwise with 7.9 g. (BrCH₂)₂ (VI) at 0°, heated several hrs. at 30-50°, and the precipitate filtered off gave a reaction product of VI and Et₂NH; the filtrate hydrolyzed gave Ach (as 2,4-dinitrophenylhydrazone) and a red oil, which did not react with 2,4-(O₂N)₂C₆H₃NHNH₂ (VII). II (16.77 g.) and 19.05 g. MeI in 50 cc. petr. ether stirred 36 hrs. at -70° gave N,N-dimethylpiperidinium iodide (VIII); after acid hydrolysis the filtrate gave a viscous oil which did not yield a precipitate with VII. II and MeI without a solvent reacted at 20° and gave the same products. The addition of an equivalent amount N-ethyldicyclohexylamine (IX) did not change

the

result. Similar results were obtained on treating II with BuBr as well as V with BuBr, MeI, and EtI with or without IX. Freshly dist. III (14.0 g.) in 100 cc. Et₂O treated with 17.0 g. MeI, kept 5 days, and the product extracted with Me₂CO gave VIII, m. 346-9°; the filtrate concentrated gave a viscous oil, from which only impure VIII was separated and no other definite product. The above experiment was repeated many times with interruption at certain intervals to always give VIII and more or less oil. Less carefully fractionated III or aged III treated as above in Et₂O or petr.

ether gave (after several min.) a small amount piperidine-HI; the filtrate behaved like those above. A similar result was obtained when III was treated as above but in an open vessel. III (38 g.) and 57 g. IX in 20 cc. MeCN treated dropwise with 38.7 g. CH₂:CHCH₂Br in 15 cc. MeCN with ice cooling, stirred 1 hr. at 0°, 30 min. at 14°, and 10 min. at 50°, hydrolyzed with cold dilute HCl, the resulting precipitate and its filtrate extracted with Et₂O, the extract washed with aqueous NaHCO₃, and distilled gave

7.13 g. EtCH(CH₂CH:CH₂)CHO (X), b. 142-4°; 2,4-dinitrophenylhydrazone m. 111° (MeOH), homogeneous by **paper** chromatography. A portion of X ozonized in absolute EtOH at -70°, hydrogenated with Pd, distilled, and the distillate treated with VII gave a mixture of 2,4-dinitrophenylhydrazones, in which was detected (**paper** chromatography with cyclohexane-HCONMe₂) 2,4-(O₂N)₂C₆H₃NHN:CH₂ (Xa). MeCH:CHCH₂Br (XI) (containing 85% XI and 15% CH₂:CHCHMeBr (27.0 g.) in 40 cc. MeCN treated dropwise with 28.2 g. IV with stirring and ice cooling, after 1 hr. the MeCN distilled in vacuo, the residue hydrolyzed with cold dilute HCl, and the product isolated with Et₂O gave 4.3 g. mixture (XII) of 9:1 EtCH(CHMeCH:CH₂)CHO (XIII)-EtCH(CH₂CH:CHMe)CHO, b₁₂₀ 96-9°, which yielded a 2,4-dinitrophenylhydrazone of XIII, m. 96° (MeOH). XII (3.85 g.) in EtOH hydrogenated with Raney Ni (1 molar equivalent H absorbed in 2 hrs.), filtered, and the filtrate treated with VII gave 2,4-(O₂N)₂C₆H₃NHN:CHCH₂EtBu (XIV), m. 109° (EtOH), which was not depressed with authentic XIV (m. 123°). XII (400 mg.) ozonized in absolute EtOH at -70°, hydrogenated with Pd, distilled, and the distillate treated with VII gave a product which showed (**paper** chromatography) a strong spot of Xa and an extremely weak spot of 2,4-(O₂N)₂C₆H₃NHNH:CHMe. 1-(2-Methylpropenyl)pyrrolidine (XV) (9.8 g.) and 11.3 g. MeI in 50 cc. Et₂O kept 48 hrs. at room temperature gave 20.1 g. XV.MeI (XVI), extremely hygroscopic, decomposing in air, forming with AgNO₃ in MeCN an N-methonitrate (oil). XVI (10.4 g.) boiled briefly with excess alkaline KMnO₄ solution, distilled, and the distillate treated with VII gave 2,4-(O₂N)₂C₆H₃NHN:CM₂ (XVII), m. 126-7°. XVI (14.0 g.) in H₂O treated with excess Ag₂O, filtered, the filtrate distilled (finally in vacuo), the combined fractions acidified with HCl, and extracted with Et₂O gave 2.5 g. Me₂CHCHO (XVIIa); the aqueous acid phase made alkaline and extracted with

Et₂O gave a mixture of bases, containing at least 5 components (gas chromatography). XVI (16.1 g.) refluxed 5.5 hrs. with 18 g. H₂NCH₂CH₂OH gave 3.1 g. XV. XV (12.1 g.) and 15.1 g. EtI in 50 cc. Et₂O kept 24 hrs. at room temperature gave 3.5 g. ethiodide (XVIII) of XV, hygroscopic,

decomposing rapidly in air. XVIII (2.5 g.) refluxed 3 hrs. with 30 cc. N HCl and extracted with Et₂O gave (from the extract) 1.2 g. 2,4-(O₂N)₂C₆H₃NHN:CHCHMe₂ (XIX), m. 182-3°; the aqueous acid phase made alkaline and extracted with Et₂O gave pyrrolidine (XX) picrate (XXI), m. 111-12°. XVIII treated with AgNO₃ in MeCN gave the ethonitrate of XV, oil, decolorizing KMnO₄ and Br. XVIII (10.4 g.) heated with excess alkaline KMnO₄ solution gave (from the distillate) 1 g. Me₂CO, isolated as XVII. XVIII (3.7 g.) in H₂O treated with excess Ag₂O, filtered, and the filtrate distilled gave C₂H₄, XVIIa (as XIX), and XX (as XXI). 1-(2-Methylpropenyl)piperidine (XXII) (20.6 g.) and 21.0 g. MeI in 50 cc. Et₂O kept 24 hrs. at room temperature and refluxed 6 hrs. gave 8.5 g. methiodide (XXIII) of XXII, less hygroscopic than XVI, decomposing in air; hydrolysis of the filtrate gave only XVIIa. XXIII (5.0 g.) refluxed 2 hrs. with 25 cc. 5% aqueous HCl gave only a little XVIIa. XXIII (8.5 g.) refluxed 5 hrs. with 9.15 g. H₂NCH₂CH₂OH (XXIV) and distilled gave 2.5 g. XXII. XXII (16.8 g.) and 18.9 g. EtI in 30 cc. Et₂O kept 24 hrs. and refluxed 6 hrs. gave 4.0 g. ethiodide (XXV) of XXII, decomposing in air; the filtrate contained no C-alkylation products. XXV (3.2 g.) heated 2 hrs. with 25 cc. 5% aqueous HCl gave only a little XVIIa. XXV (6.5 g.)

refluxed 5 hrs. with 6.0 g. XXIV and distilled gave 1.6 g. XXII.
 BrCH₂CH:CHCH₂Br (12.1 g.) added to 14.1 g. XV in 30 cc. MeCN, kept 12
 hrs., hydrolyzed, and extracted with Et₂O gave only very little XVIIa;

concentration

of the aqueous phase gave 24.2 g. probably the bis quaternary ammonium salt.
 Triethyloxonium tetrafluoroborate (5.7 g.) in CH₂Cl₂ added dropwise to 4.4
 g. ZCH:CETBu in Et₂O, kept 12 hrs. at 20°, refluxed 1 hr., evaporated
 in vacuo, the residue stirred several hrs. with H₂O, and extracted with Et₂O
 gave 1 g. BuCH₂CHO; the aqueous acid phase contained no carbonyl compds.;
 after Et₂O extraction, a viscous nondistillable residue was formed.

CC 31 (Heterocyclic Compounds-One Hetero Atom)

IT 78-84-2P, Isobutyraldehyde 123-05-7P, Hexanal, 2-ethyl- 3333-08-2P,
 Piperidinium compounds, 1,1-dimethyl-, iodide 5204-80-8P, 4-Pentenal,
 2-ethyl- 5204-82-0P, 4-Pentenal, 2-ethyl-, (2,4-dinitrophenyl)hydrazone
 6053-97-0P, Vinylamine, N,N-diethyl- 7182-09-4P, Piperidine, 1-propenyl-
 7182-10-7P, Piperidine, 1-(1-butenyl)- 14086-22-7P, Hexanal, 2-ethyl-,
 (2,4-dinitrophenyl)hydrazone 15431-03-5P, Morpholine, 4-(1-butenyl)-
 20719-99-7P, 4-Hexenal, 2-ethyl- 36401-93-1P, 1,1-Ethanediamine,
 N,N,N',N'-tetraethyl- 49845-26-3P, Morpholine, 4-(1-heptenyl)-
65819-79-6P, Piperidinium, 1-methyl-1-(2-methyl-2-propenyl)-,
 iodide 75263-42-2P, 4-Pentenal, 2-ethyl-3-methyl- 85794-01-0P,
 Pyrrolidine, 1-(2-methylallyl)- 92145-59-0P, Piperidine,
 1-(2-methylallyl)- 92325-41-2P, 4-Hexenal, 2-ethyl-,
 (2,4-dinitrophenyl)hydrazone 93226-86-9P, 1-Methyl-1-(2-
 methylpropenyl)pyrrolidinium iodide **95516-82-8P**,
 1-Ethyl-1-(2-methylallyl)pyrrolidinium nitrate **95534-23-9P**,
 1-Ethyl-1-(2-methylallyl)pyrrolidinium iodide **96731-99-6P**,
 1-Ethyl-1-(2-methylallyl)piperidinium iodide
 RL: PREP (Preparation)

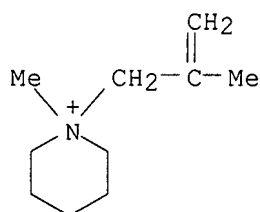
(preparation of)

IT **65819-79-6P**, Piperidinium, 1-methyl-1-(2-methyl-2-propenyl)-,
 iodide **95516-82-8P**, 1-Ethyl-1-(2-methylallyl)pyrrolidinium
 nitrate **95534-23-9P**, 1-Ethyl-1-(2-methylallyl)pyrrolidinium
 iodide **96731-99-6P**, 1-Ethyl-1-(2-methylallyl)piperidinium iodide
 RL: PREP (Preparation)

(preparation of)

RN 65819-79-6 HCAPLUS

CN Piperidinium, 1-methyl-1-(2-methyl-2-propenyl)-, iodide (9CI) (CA INDEX
 NAME)



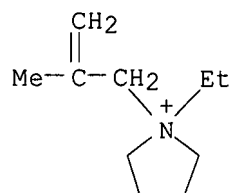
● I⁻

RN 95516-82-8 HCAPLUS

CN 1-Ethyl-1-(2-methylallyl)pyrrolidinium nitrate (7CI) (CA INDEX NAME)

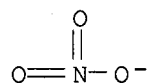
CM 1

CRN 95516-81-7
CMF C10 H20 N

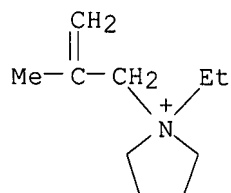


CM 2

CRN 14797-55-8
CMF N O3

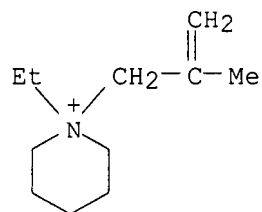


RN 95534-23-9 HCAPLUS
CN 1-Ethyl-1-(2-methylallyl)pyrrolidinium iodide (7CI) (CA INDEX NAME)



● I⁻

RN 96731-99-6 HCAPLUS
CN 1-Ethyl-1-(2-methylallyl)piperidinium iodide (7CI) (CA INDEX NAME)



● I⁻

=> => d bib abs hitstr retable tot

L97 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 1995:839017 HCAPLUS
 DN 124:11396
 TI Quaternary ammonium salt-type surfactants and their uses as emulsifiers or dispersants for suspension polymerization and resin modifiers
 IN Mizutari, Takeaki; Tsuzuki, Masahide; Komya, Kaoru
 PA Asahi Denka Kogyo KK, Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

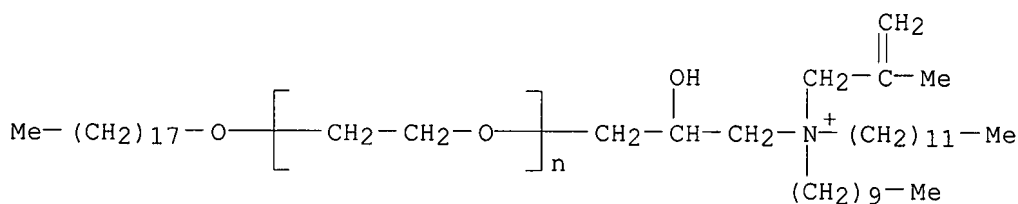
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07185296	A	19950725	JP 1993-330578	19931227 <--
	JP 3459103	B2	20031020		
PRAI	JP 1993-330578		19931227 <--		

AB The title agents comprise $[R_1(AO)_nCH_2CH(OH)CH_2NR_2R_3R_4]^+ X^-$ [$R_1, R_2, R_4 = C_1-36$ linear or branched (optionally F-substituted) alkyl, alkenyl, aryl; $R_3 = CH:CR'CH_2$; $R' = H, Me$; $A = C_2-4$ (substituted) alkylene; $n \geq 0$; $X = \text{halogen, OH, NO}_3, SO_4Me$]. Thus, a such surfactant was obtained from the reaction product of $(C_{12}H_{25})_2NH$, dodecyl glycidyl ether and allyl chloride.

IT **170927-53-4P 171675-44-8P**
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (quaternary ammonium salt-type surfactants and uses as emulsifiers or dispersants for suspension polymerization and resin modifiers)

RN 170927-53-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[3-[decyldodecyl(2-methyl-2-propenyl)ammonio]-2-hydroxypropyl]- ω -(octadecyloxy)-, bromide (9CI)
 (CA INDEX NAME)



● Br⁻

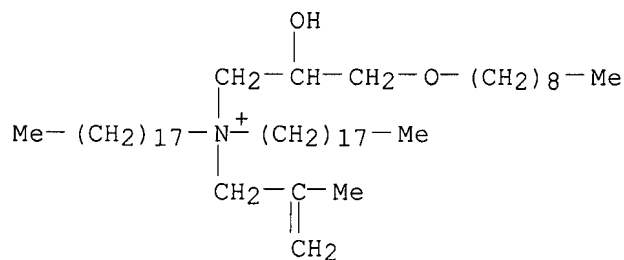
RN 171675-44-8 HCAPLUS

CN Octadecen-1-aminium, N-[2-hydroxy-3-(nonyloxy)propyl]-N-(2-methyl-2-propenyl)-N-octadecenyl-, chloride (9CI) (CA INDEX NAME)

CM 1

CRN 171675-43-7

CMF C52 H106 N O2



L97 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1985:71166 HCAPLUS

DN 102:71166

TI Electric conducting agents

PA Daiichi Kogyo Seiyaku Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59127304	A	19840723	JP 1983-1512	19830107 <--
PRAI	JP 1983-1512		19830107	<--	

AB The title agents contain a copolymer obtained by copolymerization of (1) 1 mol cationic monomer $\text{RNR}^+\text{1}(\text{CH}_2\text{CR}_2\text{:CH}_2)(\text{CH}_2\text{CR}_3\text{:CH}_2)\text{X}^-$ (I; R, R1 = Me, Et, benzyl; R2, R3 = H, Me; X = Cl, Br) and (2) polymerizable unsaturated carboxylic acid. The agents show excellent characteristics in humidity resistance and solvent resistance, and are especially useful for electrofacsimiles, electrographics, and films. Thus, I (R, R1 = Me; R2, R3 = H; X = Cl) 170 g and methacrylic acid 100 g were reacted in the presence of NH_4 persulfate 0.1 g to yield a copolymer, which was an excellent conducting agent.

IT 94649-42-0

 RL: TEM (Technical or engineered material use); USES (Uses)
(elec. conductors)

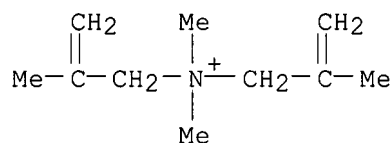
RN 94649-42-0 HCAPLUS

CN 2-Propen-1-aminium, N,N,2-trimethyl-N-(2-methyl-2-propenyl)-, bromide, polymer with 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 88348-84-9

CMF C10 H20 N . Br

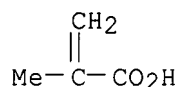


● Br⁻

CM 2

CRN 79-41-4

CMF C4 H6 O2



L97 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1984:104779 HCAPLUS

DN 100:104779

TI Moisture-sensitive sensors

PA Hitachi, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58213245	A	19831212	JP 1982-96350	19820607 <--
	JP 61058778	B	19861213		
PRAI	JP 1982-96350		19820607	<--	

AB Compds. containing 2 vinyl groups are used as crosslinking agents for polymers for moisture-sensitive sensors. Thus, a sensor element containing a coating of 0.02:0.1:0.2 (molar monomer feed ratio) dimethyl(2-hydroxy-3-methacryloxypropyl)(2-methacryloxyethyl)ammonium chloride-dimethyl(2-methacryloxyethyl)octylammonium chloride-Me methacrylate copolymer [89034-91-3] had elec. resistance at 30% relative humidity 1.03 + 105 (initial), 1.23 + 105 (after a soiling resistance test), 1.19 + 105 (after a water resistance test), and 1.16 + 105 Ω (after an ethanol resistance test), compared with 8.45 + 104, 1.41 + 105, 2.18 + 105, and 1.94 + 105, resp., when a coating of 0.1:0.2 dimethyl(2-methacryloxyethyl)octylammonium chloride-Me methacrylate copolymer was used.

IT 89034-94-6

RL: USES (Uses)

(moisture-sensitive sensors)

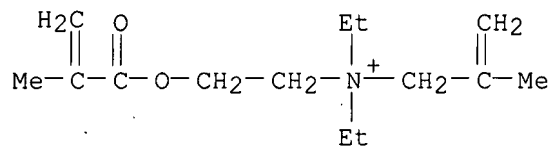
RN 89034-94-6 HCAPLUS

CN 2-Propen-1-aminium, N,N-diethyl-2-methyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, chloride, polymer with 2-hydroxyethyl 2-methyl-2-propenoate and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 89034-93-5

CMF C14 H26 N O2 . Cl

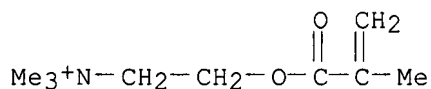


● Cl⁻

CM 2

CRN 5039-78-1

CMF C9 H18 N O2 . Cl

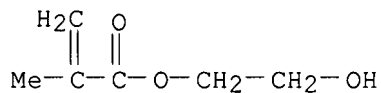


● Cl⁻

CM 3

CRN 868-77-9

CMF C6 H10 O3



L97 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1968:419966 HCAPLUS

DN 69:19966

TI Polysulfones

IN Harada, Toru; Katayama, Masamichi

PA Nitto Spinning Co., Ltd.

SO Jpn. Tokkyo Koho, 6 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

FAN.CNT 1

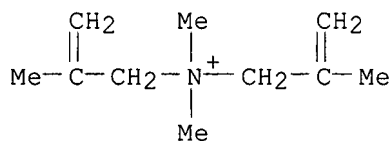
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 43005891	B4	19680304	JP	19640525 <--
AB	Polysulfones having a basic N are provided by the polymerization of (a) an amine or quaternary ammonium salt having an allyl or methallyl radical, such as diallylamine-HCl (I), methylallylamine-HBr or, methyl dodecyldiallylammonium chloride and (b) SO ₃ gas, in the presence of a radical catalyst, such as cumene hydroperoxide, or ammonium peroxysulfate (II). These polysulfones are useful as ion exchange resins, water-soluble paints, and adhesives. Thus, a mixture of dry SO ₃ gas 32, Me ₂ SO (III) 312, I 133.5, and II 1.46 parts was polymerized 20 hrs. at 30° under N to give 110 parts white powdery polymer containing 14.82% S, soluble in H ₂ O and II. Strong absorption bands due to -SO ₂ - were observed in the ir absorption spectrum at 1350 and 1140 cm. ⁻¹ , intrinsic viscosity (0.1 mole/l. NaCl solution at 30°) .apprx. 0.91, decomposed 200-20° in air.				
IT	29013-79-4P RL: PREP (Preparation) (preparation of)				
RN	29013-79-4 HCAPLUS				
CN	Ammonium, dimethylbis(2-methylallyl)-, chloride, polymer with sulfur dioxide (8CI) (CA INDEX NAME)				
CM	1				
CRN	7446-09-5				
CMF	O2 S				

$$\text{O}=\text{S}=\text{O}$$

CM 2

CRN 6982-68-9

CMF C10 H20 N . Cl


 ● Cl⁻

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 (FILE 'HOME' ENTERED AT 09:52:10 ON 12 FEB 2007)
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 09:52:32 ON 12 FEB 2007

L1 1 S US20050272889/PN OR (US2005-505346# OR WO2003-JP1918 OR JP200

jan delaval - 12 february 2007

L2 9 E KIYOSADA/AU
 9 S E6
 E TOSHITSUGU/AU
 E ENDOU/AU
 L3 93 S E4,E11
 E AKIRA/AU
 L4 13 S E3
 L5 1 S E20
 E IWATA/AU
 L6 1 S E3
 E IWATA S/AU
 L7 244 S E3,E4
 L8 69 S E15
 E IWATA NAME/AU
 L9 35 S E4
 E SATORU/AU
 L10 3 S E3
 E OGAWA/AU
 L11 2 S E3
 E OGAWA M/AU
 L12 498 S E3-E5
 L13 48 S E70
 E OGAWA NAME/AU
 L14 82 S E4
 E MASATOMI/AU
 E PMC/PA,CS
 L15 280 S E3,E4 OR ((SEIKO? OR JAPAN?) (L)PMC?)/PA,CS
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 09:56:51 ON 12 FEB 2007

L16 37 S E1-E37
 L17 STR
 L18 12 S L17 CSS SAM
 L19 STR L17
 L20 0 S L19 CSS SAM
 L21 SCR 970 AND 963 AND 1054 AND 1992
 L22 3 S L19 AND L21 CSS SAM
 L23 742 S L19 AND L21 CSS FUL
 SAV L23 BERNSH505/A
 L24 673 S L23/COM
 L25 69 S L23 NOT L24
 L26 2 S L25 AND C25H50NO
 L27 673 S L24 NOT L25
 L28 675 S L26,L27
 L29 STR L19
 L30 20 S L29 CSS SAM SUB=L28
 L31 355 S L29 CSS FUL SUB=L28
 SAV L31 BERNSH505A/A
 L32 320 S L28 NOT L31

FILE 'HCAPLUS' ENTERED AT 10:24:34 ON 12 FEB 2007

L33 140 S L31
 L34 122 S L32
 L35 131 S L33,L34 AND PY<=2002 NOT P/DT
 L36 205 S L33,L34 AND (PD<=20020222 OR AD<=20020222 OR PRD<=20020222)
 L37 74 S L36 AND P/DT
 L38 205 S L35,L37
 L39 11 S L1-L15 AND L33,L34
 L40 1 S L39 AND L38
 L41 10 S L39 NOT L40

FILE 'REGISTRY' ENTERED AT 10:27:08 ON 12 FEB 2007

L42 21 S L16 AND L23
L43 0 S L42 NOT L31,L32
L44 16 S L16 NOT L42
L45 4 S L44 AND (C8H17N OR C7H15NO)

FILE 'HCAPLUS' ENTERED AT 10:29:17 ON 12 FEB 2007

L46 1 S L45 AND L40
E PAPER/CT
L47 105504 S E3-E58
L48 231 S E62
L49 22871 S E75-E77,E70
L50 10785 S E87-E95
E E3+ALL
L51 120380 S E2+NT
E E98+ALL
E E3+ALL
E E99+ALL
L52 5497 S E3
E E8+ALL
L53 70555 S E2+OLD
E PAPER/CT
E E62+ALL
E E2+ALL
L54 4443 S E2+OLD
E E10+ALL
E PAPER/CT
E E87+ALL
L55 10785 S E3
L56 260875 S PAPER?/SC,SX
L57 1 S L38 AND L47-L56
L58 3 S L38 AND ?PAPER?
L59 3 S L46,L57,L58

FILE 'REGISTRY' ENTERED AT 10:35:14 ON 12 FEB 2007

E ACRYLAMIDE/CN
L60 1 S E3
E METHACRYLAMIDE/CN
L61 1 S E3
E METHALLYL/CN
L62 1 S E115
E ALLYLSULFONIC ACID/CN
L63 1 S E3
L64 2 S L60,L61
L65 2 S L62,L63
SEL RN L64
L66 16894 S E1-E2/CRN
SEL RN L65
L67 1696 S E3-E4/CRN
L68 35 S L31,L32 AND L66
L69 10 S L31,L32 AND L67
L70 10 S L68 AND L69
L71 25 S L68 NOT L70

FILE 'HCAPLUS' ENTERED AT 10:39:21 ON 12 FEB 2007

L72 5 S L70
L73 1 S L72 AND L38
L74 3 S L59,L73
L75 1 S L71 AND L38

L76 3 S L59,L73,L75
 L77 71 S L31 (L) PREP+NT/RL
 L78 69 S L32 (L) PREP+NT/RL
 L79 105 S L77,L78 AND L38

FILE 'REGISTRY' ENTERED AT 10:41:45 ON 12 FEB 2007

L80 1 S UREA/CN

FILE 'HCAPLUS' ENTERED AT 10:41:48 ON 12 FEB 2007

L81 1 S L80 AND L79
 L82 2 S UREA AND L79
 L83 2 S L81,L82
 L84 1 S L83 NOT CCR/TI
 L85 3 S L76,L84

FILE 'REGISTRY' ENTERED AT 10:42:41 ON 12 FEB 2007

FILE 'HCAPLUS' ENTERED AT 10:42:53 ON 12 FEB 2007

L86 44 S L79 AND P/DT NOT L85
 L87 30 S L86 AND US/PC,PRC,AC
 L88 44 S L86,L87
 SEL HIT RN

FILE 'REGISTRY' ENTERED AT 10:43:53 ON 12 FEB 2007

L89 80 S E5-E84
 L90 2 S L89 AND PMS/CI
 L91 37 S L31 AND PMS/CI
 L92 20 S L32 AND PMS/CI
 L93 44 S L90-L92 NOT L16

FILE 'HCAPLUS' ENTERED AT 10:45:01 ON 12 FEB 2007

L94 14 S L93
 L95 4 S L94 AND (PD<=20020222 OR AD<=20020222 OR PRD<=20020222)
 L96 2 S L89 AND L95
 L97 4 S L95,L96

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